

TRAVEL 9-1
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24 JUN 1959

MEMORANDUM FOR: Deputy Director (Intelligence)

THROUGH: Assistant Director, Research and Reports *Noted By AD/RR*

FROM: [REDACTED] 25X1A9a

SUBJECT: Report on Overseas TDY to Western Europe, from
23 April to 5 June 1959

I. Purpose of Travel

A. To survey the major cartographic effort, both commercial and official, in France, Italy, Switzerland, Western Germany, the Netherlands, and England.

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II. Activities and Findings

A. France (24 - 30 April)

1. Institut Geographique National. The IGN is the official mapping organization in France. It is responsible for the surveying, compiling, drafting, reproduction, and distribution of all topographic maps produced in that country. Like many European topographic units it has a tradition in cartography of many years. Mr. Laclavere, Assistant to the Director, is a strong motivating force in the administration of the IGN. He is a strong proponent of modern techniques and concepts and IGN has recently re-designed the new French 1:100,000 series which is their basic medium-scale mapping program. They expect to complete coverage by 1965. The completion of the 1:50,000 series should follow by several years. Mr. Laclavere is not favorable to the U.S. sponsored detailed 1:20,000 series for NATO use but prefers a more simplified version along with the use of available aerial mosaics. Mr. de Brummer, Chief Engineer, is the leading figure concerned with the improved techniques in cartography at IGN.

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at present.) Mr. Laclavere has traveled in the USSR, believes the Soviets have covered their country at a 1:100,000 scale, at least the areas of economic importance. He also feels that "over-organization" rather than "security" has lead to many of the apparent restrictions on Russian publications. IGN must be recognized as one of the leading

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cartographic installations in Europe, modern and well equipped. Of considerable interest was the procedure of contracting out work to women who were former employees or at least trained by IGN. This work is being done in the home on a yearly contract basis. Also of special interest was the emphasis on projected photo-lettering. This method is essentially a French invention; there is current interest at the Army Map Service in developing an advanced proto-type of such a lettering system.

2. Société Française de Cartographie. The Société under the directorship of Professor Libault is known for its contribution to cartography in the form of the Atlas de France. Professor Libault who is also on the faculty at the University of Paris is responsible for the production of this excellent national atlas and has just completed the revision of all three sections. The new edition is, with the exception of some bases, an entirely new product. Approximately 50 students helped compile statistics for the atlas although only 3 cartographers did the actual construction. The design and format of the atlas and of each map are the result of Prof. Libault's efforts. As at IGN all place names and most map symbols were photographically projected by means of the "Nomofot", a machine Professor Libault invented. (He is currently working on a proto-type of a machine that will project "line work" by etching on glass negatives.) Techniques employed in the preparation of the atlas are as modern as those used in D/GC. From Professor Libault an impression of the French attitude toward geographic name standardization was gained. They favor an international commission for establishing an international alphabet, but do not believe agreement on transliteration of non-Roman alphabet languages is feasible. In Roman alphabet languages, however, they favor always using local spellings. (These impressions will be valuable to this officer in his work on the U.S. Board on Geographic Names.) Professor Libault's opinion of Russian cartographic effort is that it is slow and not very modern but employs large numbers of persons - thus relatively high production. He claims to have seen modern equipment in use at training centers but not in the line of production.

3. Michelin et cie. Michelin maps and tourist guides are the most famous of its type in Europe. The cartographic effort of this commercial company (Michelin Tire Company) centers around the preparation of map coverage of parts of Western Europe at the scale of 1:200,000 and city plans for use in the numerous travel guides. It should be noted

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that the cartographic work at Michelin is of the very highest quality in spite of its intended use in tourism. Techniques are both very modern (they use the Hedago-Nomofot for type) and somewhat conservative as they have not adopted scribing nor plastics into their procedures. Approximately 40 persons devote full time to cartographic work producing 6 new maps per year and revising most of their map coverage every 12 to 18 months. The cartographers and draftsmen are mainly recruited from the IGN.

4. Summary. Although not feasible in the Agency the employment of part-time cartographers by the IGN was found to be both unique (in Europe) and practical in France. The strong support and adoption of the projected photo-lettering system by the French was most noteworthy and will be studied carefully for possible use in D/GC. French cartography, most of which is in the Paris area, is generally of high quality and is produced by relatively modern procedures and techniques.

B. Italy (30 April - 8 May)

1. Istituto Geografico Militare. The IGM in Firenze is the official military mapping unit in Italy. It is closely associated with the U. S. Army Map Service and employs many of the U. S. procedures and techniques. It produces the standard map series (1:25,000, 1:50,000, 1:100,000, 1:200,000, 1:500,000 and 1:1,000,000) using well tested materials (many are U.S.). Patterned on AMS methods it also produces three-dimensional plastic maps at a scale of 1:200,000. IGM efforts in the field of terrain shading are not considered to be sophisticated and are used only to emphasize the contours. A simplified method of photo-lettering will probably soon be replaced by either the Nomofot or a monotype system. The IGM plant is fairly modern, well equipped, and is actively producing large quantities of maps for both Italian and NATO use.

2. Litografia Artistica Cartografica. A small, modern, highly efficient cartographic shop employing less than 35 persons. Major effort is in contract work for the production of all types of tourist maps (road, hiking, city plan) and geological maps. Most of the employees are former IGM personnel who have had the benefit of that experience and training. As the unit is post-World War II, it is completely modern in concept and produces remarkably effective maps, well designed and very readable. The present director is retired Col. Piero Dal Piaz who previously spent 30 years with IGM. An arrangement exists whereby LAC

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can use IGM materials extensively but they are forced to re-draft the data.

3. Istituto Geografico Visceglia. This is a somewhat ambitious title for an enterprising entrepreneur. Professor Visceglia personally directs the work of his company in Firenze, Rome, Venice, and Genova. Essentially the cartographic effort here consists of using published source materials and recasting them into products of the Istituto. In this manner over 1,000 maps have been produced and offered for sale. The quality is not high but is adequate for the intended consumer. Most effort is directed toward tourist-type city plans and regional maps. Techniques and procedures are somewhat make-shift to fit the source materials available and did not provide this officer with any new concepts in compilation or map construction. Professor Visceglia gives one the impression of being most willing to work for the highest bidder.

4. Touring Club Italiano. As its name implies this company devotes its efforts toward tourism. Started originally in the 1850's it compiled its first map over 50 years ago. Today it is one of the leading (by quality) commercial mapping installations in Europe. Its most famous product is the TCI Atlas which has recently been revised and is considered by many to be the finest single-volume world atlas available. TCI also produces regional maps at 1:200,000 and 1:500,000 scales as well as city plans for their tour-guides. Although no scribing is employed modern plastics and ink are used. Essentially all place names are hand lettered which adds appreciably to the quality of the Atlas. The cartographic unit has proofing facilities and provides the lithographic section (not in TCI) with original drawings and exacting color proofs. Approximately 20 persons are employed in direct cartographic work along with 6 students who are in a training status. The latter remain in this status for 2 years during which time they neither pay tuition nor receive pay. Upon successful completion of the course they are employed by TCI. The map holdings on the bloc countries were not of special interest.

5. Istituto Geografico De Agostini. A general publishing and printing establishment that has placed considerable emphasis on cartography and geographic-type publications. The newly appointed scientific director, Dr. Bonapace, is a keen-minded young man who evaluates all source materials and directs the effort of 25 cartographer-draftsmen and stone engravers. The Great Atlantic Atlas is their best known cartographic effort. Stone plates continue to be used for the regular

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atlas sheets but modern (plastic, ink, stickup, etc.) methods are employed for all economic maps in the atlas and for all other cartographic efforts. A possible weakness in this high-quality atlas is the phonetic system of geographic name spelling. An intensive training program is available to young persons desiring a career in cartography with the firm. A minimum of 2 years without pay followed by 4 years as an apprentice are required to meet the full standards of employment. An additional 4 years are required for engravers. This publishing house has considerable capacity and very high standards of accomplishment.

6. Summary. Italian cartography is best known in the field of atlas production. Both the TCI and De Agostini atlases are excellent in both cartographic sophistication and data reliability. Official mapping in Italy is generally very good and considered adequate to fulfill known requirements.

C. Switzerland (8-14 May)

1. Eidgenossische Landestopographie. The official topographic mapping organization in Switzerland. The excellence of cartographic effort marks this installation as the best of its type in Europe. Thoroughly tested methods and careful attention to detail have resulted in topographic maps of superb quality. One feels the depth of research and a long heritage in the cartographic profession here at the Landestopographie. The unit is responsible for the 1:25,000, 1:50,000, 1:100,000 and 1:200,000 series as well as all first to third-order geodetic control. Of special interest was the emphasis being given the presentation of terrain. Switzerland, a country of severe relief conditions, has led the world in the development of terrain representation. At the Landestopographie the art is highly developed, being entirely an air-brush technique. All work currently is scribed on glass, and modern methods are employed throughout the construction process. Many unique scribing instruments are developed and produced by the unit, as well as specially designed drafting tables, chairs, etc. Currently approximately 150 persons are employed at the Service supported by basic survey work being done under contract. The ideally quiet working conditions which were very noticeable were due to a building plan which provided for less than 4 persons per room - usually two. Director Huber and Chief Technician Dr. Chervet form one of the most highly competent teams in European cartography.

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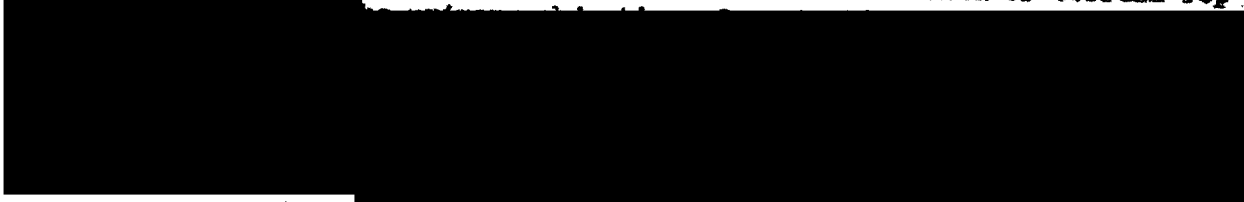
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2. Kümmerly & Frey. The Kümmerly and Frey families have owned this company since its beginning. Employing approximately 150 persons they devote about 75% of their capability toward cartography and the other 25% in other types of commercial printing. They are currently enlarging their printing capacity to a considerable degree. The cartographic techniques employed are modern, including some scribing on plastic and glass. Terrain shading is accomplished by both pencil and air-brush. An attempt to use proved sources of information was very evident and has resulted in a product of fine quality. This firm prints maps for the Swiss Government as well as producing school and tourist maps for their own sales.

3. Institut Orell-Füssli. Orell-Füssli is a very large publishing house that carries a side-line of cartographic effort. Although only 35-40 persons out of 600 are concerned with cartography the quality of work is noteworthy. They concentrate on city plans, tourist maps, geological maps and a variety of other special subject maps. Modern techniques are employed with all names being prepared by a photo-lettering system. The geological maps are scribed on glass whereas all others are drawn on Astrolan with Pelikan (German) inks. In keeping with other Swiss cartographic effort the quality of work at Orell-Füssli is high. This concern has a very large printing capacity featuring at least 15 large-sized offset presses with all related equipment.

4. Federal Institute of Technology - Professor Imhof. Dr. Imhof is considered by many as the foremost living cartographer. He has advanced the discipline of cartography immeasurably by many years of research and teaching. He is advisor to most cartographic effort in Switzerland, both commercial and official, and has been a leading figure in developing what is known as the Swiss method of terrain rep-



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5. Summary. Cartographic effort in Switzerland, particularly in the topographic field, is probably the best in Europe. Advanced techniques in terrain representation and a tradition of cartographic excellence are most evident. One is impressed with the advanced state

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of the cartographic profession in Switzerland and here particularly we should continue to study and apply advanced techniques to our own cartographic effort.

D. Western Germany. (14 - 25 May)

1. Bundesanstalt fuer Landeskunde. A modern, special-subject map unit under the direction of Professor Meynen that has just moved from Remagen into new quarters in Bad Godesburg. The emphasis here is in the use of persons with geographic training. Detailed geographic studies, well documented with maps, are major production items. Of recent completion is a new atlas "East Middle Europe" which traces the Germany settlement patterns and all related topics in this area of Europe from the Middle Ages to the present. It is a cultural-political atlas of considerable excellence in spite of its "propaganda" angle. The unit employs 75-80 persons in the compilation, drafting, and reproduction of its cartographic effort. It is a modern shop in every sense and features a unique situation whereby the map reproduction facilities are under the direction of the cartographic unit. In many respects this shop is like that here in the Agency.

2. Institut fuer Angewandte Geodasie. This is a Federal mapping agency whereas most other cartographic effort in Germany is at the Land (State) level. Western Germany's cartographic contribution to NATO is coordinated by this Institut. They are mainly concentrating at the 1:250,000 (NATO) and 1:200,000 (civilian) scales with initial work at the 1:50,000 scale just getting under way. The impression was gained that they were receiving good sources of map information on East Germany. Cartographic techniques employed were modern with glass scribing much in evidence. Swiss scribing instruments and some of their own design were being used. As found elsewhere specially designed type faces were being used by a photo-lettering system. Shaded relief efforts were by air brush with reproduction in either one or three color separations. Their training school will accept foreign students in limited numbers. The quality of the cartographic work at this Institut is considered to be very high.

3. Klimsch & Company. A visit was made to Klimsch and Company to a) have a tour of a modern photographic equipment company and, b) ascertain, if possible, the contact it had with the bloc countries when and if their product was purchased by them. This concern is a world leader in the production of copy cameras and all related equipment. Employing over 500 persons they build complete cameras and market them

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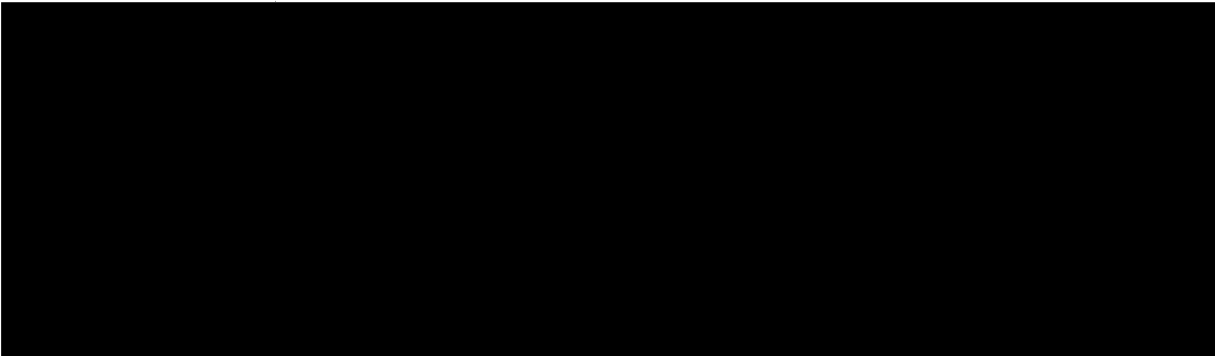
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throughout the world. The Russians have purchased two cameras but refused to permit Klinsch & Company to install them, which is the regular procedure. Mr. Schumacher who speaks excellent English is the head of the Company and has visited the U. S. on several occasions.

4. Summary. German cartographic effort is not as well coordinated as in most other West European countries. Much of the effort is at the Land level rather than the Federal. Quality of work however is very high and most modern techniques are being employed. As a nation it probably has not as yet regained its pre-war cartographic eminence.

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E. The Netherlands. (25 May - 1 June)

1. Topografisch Dienst. Under the Ministry of War this is the official mapping agency of the Netherlands' Government. It is responsible for the surveying, compiling, drafting, reproduction and distribution of all topographical map scales. The current director, Mr. Bramlage, will retire next year and will be replaced by the present chief of geodesy, topography, and cartography, Mr. den Hengst. This unit employs approximately 300 persons of which 100 are women. This was the only cartographic unit visited where women were employed in appreciable numbers (excluding the contract work at IGN). After a training period of 8-12 months the basic scribing and drafting operations are assigned to the women employees. The topographers (25 total) spend each summer in the field checking aerial photos from which they compile the manuscript maps and prepare the specifications for the draftsmen. The Netherlands being small in area is intensively mapped and all series are scheduled for revision each 10 years. Reflecting the nature of the polders these are the only topographic series in Europe that distinguish "meadow or grassland" from "cultivated" area. The Topografisch Dienst

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is currently preparing 1:100,000 scale coverage on selected areas of Netherlands New Guinea. A geographical exploration party is at present in New Guinea mapping and studying the areas of this most remote land area. The techniques employed by this cartographic unit are modern and the plant is well equipped. As in most units in Europe a photo-lettering system (Hedago) is employed for geographic place names.

2. International Training Center for Aerial Survey. The ITC is sponsored and financed by the Netherlands Government and is that country's contribution to the UN's work in Underdeveloped Countries (not entirely confined to that objective only). The school is a graduate-level institution in aerial photography and photogrammetry. It can handle between 50-60 persons at one time and offers a schedule of courses that range from 6 months to 1½ years. Students from any country in the world are eligible to apply (no Russians thus far) and are given a program of instruction based on their background and training. The cost of attendance is usually borne by the individual, a private fund, or the student's government. In addition to photogrammetry the Center trains in interpretative photography in such fields as geology, forestry, and soils. The facilities at this Center are very modern and equipped with the very latest types of instruments. The Director, Professor Schermerhorn, is truly the motivating force in this Center and will be difficult to replace when he retires - he is now 64 years old. Without doubt this is the most advanced institution of its type in the world.

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3. Summary. The Netherlands supports the most advanced training center for aerial surveys in the world. It also operates an efficient official mapping organization which has maintained comprehensive map coverage of the Netherlands at several scales. The Topografisch Dienst contributes to the NATO mapping program.

F. England (1 - 5 June)

1. The Clarendon Press. Located at Oxford University the Clarendon Press has in recent years added a cartographic unit. It is headed by Mr. Bickmore who is an energetic and capable administrator. Research, compilation, and design functions are handled by persons with geographic training. Modern cartographic techniques are employed here and one senses a healthy attitude toward flexibility of procedure.

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School atlases and a National Atlas are receiving the primary emphasis at the present time. Here as elsewhere in England the Berr and Stroud Photonymograph is employed in the preparation of type for geographic place names. Three-dimensional plastic models are prepared which are photographed for use as the terrain plate on the base maps for the National Atlas. This procedure is still being tested and will be followed with interest.

2. Other. One day was also spent visiting the offices of the Town and Country Planning unit in the Ministry of Public Housing to observe the planning effort, including the cartographic, that is employed in selecting and laying-out a "new" city. Since the mid-1930's, 6 or 8 such cities have been planned and built. A visit was made to Bracknell near London where the results of such city planning were observed. A very short visit was also made to the Directorate of Military Surveys to pay respects to top officials who were known to this officer. The other major cartographic installations in Great Britain were visited several years ago and not re-visited at this time.

III. Conclusions

A. West European cartography is generally of excellent quality and is strongly supported by both governmental and private interests. Although steeped in tradition the profession has adopted modern techniques and has improved the design factor considerably since World War II.

B. On a comparative basis U. S. Governmental cartography rates very high especially when it is remembered that much of its development has been within the past 15-20 years. Techniques of map reproduction are probably more advanced in the U. S. at the present than in Europe. Commercial cartography in the U. S. however is not on a par with West Europe.

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C. The emphasis placed on photo-lettering systems for geographic place names was very evident. The development of special equipment for cartographic use was also observed with particular interest.

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IV. Problems or Difficulties

None.

V. Commitments Made

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VI. Recommendations

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B. The Cartography Division should renew its efforts to procure a photo-lettering system for geographic place names.

C. That more emphasis be directed toward developing equipment especially suited to Division requirements.

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Chief, Cartography Division

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